GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.2090
ANSWERED ON 12.02.2026

OBJECTIVES OF NATIONAL SMART GRID MISSION

2090. DR. NISHIKANT DUBEY:
SMT. MAHIMA KUMARI MEWAR:
SHRI KOTA SRINIVASA POOJARY:
SHRI P P CHAUDHARY:
SHRI RAVINDRA SHUKLA ALIAS RAVI KISHAN:
SHRI LAVU SRI KRISHNA DEVARAYALU:
SHRI DILIP SAIKIA:
DR. KALYAN VAIJINATHRAO KALE:
SHRI MANOJ TIWARI:
SHRI G M HARISH BALAYOGI:
SHRI RAMESH AWASTHI:
SHRI PRAVEEN PATEL:
SHRI PRATAP CHANDRA SARANGI:
SHRI KRISHNA PRASAD TENNETI:
DR. VINOD KUMAR BIND:
SHRI NABA CHARAN MAJHI:
SHRI RAJIV PRATAP RUDY:
SHRI AVIMANYU SETHI:
SHRI GODAM NAGESH:
SMT. KAMALJEET SEHRAWAT:
SHRI ANOOP PRADHAN VALMIKI:
SHRI LUMBARAM CHOUDHARY:
SHRI BIBHU PRASAD TARAI:

Will the Minister of POWER be pleased to state:

(a) the details of the key objectives of the National Smart Grid Mission (NSGM) and its alignment with India's vision for a modernised and efficient power sector;

(b) whether the Government has outlined the specific components and technologies involved in the NSGM, such as smart meters, energy storage and demand response systems and if so, the details thereof;

(c) the challenges being faced in the implementation of the Mission including cost, interoperability, cyber security, capacity constraints of distribution utilities and the steps being taken by the Government to address these challenges;

(d) the number of consumers benefited under NSGM projects, State/UT-wise and district-wise in Andhra Pradesh;

(e) the smart grid projects approved and implemented in Andhra Pradesh under NSGM, district-wise including project locations and present status;

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(f) the funds allocated, released and utilised under the NSGM since inception, year-wise during the last three years, State/UT-wise and district-wise in Andhra Pradesh; and

(g) the status of NSGM projects in Telangana including the number of smart meters sanctioned/installed, pilot smart grid projects undertaken and the impact on loss reduction billing efficiency and consumer services?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) & (b) : (i) National Smart Grid Mission (NSGM) was established by Government of India (GoI) in 2015 with an objective to plan and monitor the implementation of policies and programs related to Smart Grids in India.

(ii) The key components of the mission were assistance in formulation of projects including pre-feasibility studies, project appraisal, funding to projects, training and Capacity Building. NSGM contributed to development of Smart Metering ecosystem with indigenous smart meter standard IS 16444 and companion standard IS 15959 and Advanced Metering Infrastructure Service Provider (AMISP) bid documents for Capital Expenditure (CAPEX) and Design Build Finance Own Operate Transfer (DBFOOT) models.

(iii) Under NSGM, Smart Meter projects were implemented using Advanced Metering Infrastructure (AMI) technology which included Smart Metering, Head End System, Meter Data Management System (MDMS) with multiple communication technologies viz. General Packet Radio Service (GPRS)/Radio Frequency (RF) and Power Line Carrier (PLC) etc.

(c) : Under NSGM, certain challenges viz. interoperability, cyber security, capacity building etc. were faced. As regards interoperability challenges, need was identified to establish seamless data exchange between Meter Data Management System and other IT/OT systems like Billing, SCADA, Consumer information systems etc. for which suitable provisions were incorporated in the model Advanced Metering Infrastructure Service Provider (AMISP) Standard Bidding Document (SBD), along with adoption of the technology-agnostic Smart Meter standard (IS 16444)

Cyber security challenges relating to data privacy, system access, and network vulnerabilities were addressed through measures such as multi-factor authentication, privacy-by-design, data localization, compliance with the DPDP Act, 2023, and periodic third-party audits.

AMI, being new technology, faced challenges of availability of sufficient skilled manpower. However, Ministry of Power facilitated capacity building through institutions like Smart Grid Knowledge Centre (SGKC), Manesar to train utility professionals. Around, 475 professionals were trained under NSGM.

(d) & (e) Under NSGM, smart meters were successfully installed only in the State of Rajasthan (1,45,343 nos.) and UT of Chandigarh (24,214 nos.). No project was sanctioned under NSGM for the State of Andhra Pradesh.

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(f) : Out of the allocation of Rs.155.67 Cr., a total of Rs.72.27 Cr. has been released under NSGM. The details for the year-wise fund release under NSGM are at Annexure. The scheme stands closed on 31.03.2024.

(g) : One Smart Grid pilot project for Jeedimetla Industrial Area in Hyderabad, Telangana was sanctioned by Ministry of Power in 2012 under erstwhile Restructured Accelerated Power Development & Reforms Program (R-APDRP)/Integrated Power Development Scheme (IPDS). The monitoring of the pilot project including fund sanction/release and closure has been done under NSGM supervision and the pilot was successfully completed for 8882 consumers with implementation of advanced metering infrastructure, outage management system, peak load management and power quality management systems. As per the impact assessment carried out by third party agency M/s QCI, the AT&C losses for the project area dropped to 4% (2019) from 9.48% (2014).

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ANNEXURE

ANNEXURE REFERRED IN REPLY TO PART (f) OF UNSTARRED QUESTION NO. 2090 ANSWERED IN THE LOK SABHA ON 12.02.2026

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(Figures in Rs.)

Major Heads								
	Projects					Others		Total
FY	Chandigarh	Rajasthan	NSGM Estb.	Training	ISGAN	Evaluation by IITB	R&D Project at IITH	
2021–22	–	–	2,22,21,218	1,79,360	–	–	–	2,24,00,578
2022–23	–	20,99,60,000	4,36,78,583	7,08,000	18,54,000	11,21,000	3,30,900	25,76,52,483
2023–24	–	1,92,71,113	3,73,43,221	32,28,480	9,18,000	–	–	6,07,60,814

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